

ABSTRACT

A steel sheet comprises: a ferritic phase having ferritic grains of 10 or more grain size number and ferritic grain boundaries; and at least one kind of Nb precipitates and Ti precipitates. The ferritic grain has a low density region with a low precipitate density in the vicinity of grain boundary. The low density region has a precipitate density of 60% or less to the precipitate density at center part of the ferritic grain. The steel sheet consists essentially of 0.002 to 0.02% C, 1% or less Si, 3% or less Mn, 0.1% or less P, 0.02% or less S, 0.01 to 0.1% sol.Al, 0.007% or less N, at least one element of 0.01 to 0.4% Nb and 0.005 to 0.3% Ti, by mass%, and the balance being Fe.